# Author index


Abe, T. 269
Allen, G.J. 528
Altamura, M.M. 429
Antognoni, F. 520
Argüeso, P. 310
Atkinson, H.J. 472
Atkinson, R.G. 242

Baccou, J.-C. 377
Bagni, N. 520
Baizabal-Aguirre, V.M. 352
Barker-Bridgers, M. 207
Barrero, R.A. 277
Barrieu, F. 335
Bartels, D. 459
Bassi, R. 260
Beerhues, L. 64
Bechthold, A. 234
Beck, E. 193, 201
Bellincampi, D. 429
Benhamou, N. 153
Blissett, K.J. 100
Blume, A. 44
Böttger, M. 515
Boudet, A. 437
Boudet, A.M. 8
Brandt, A. 295
Buck, K.W. 93
Büntemeyer, K. 515
Bůžek, J. 506

Caldwell, C.R. 120
Camara, B. 226
Cánovas, J.L. 37
Casero, P.J. 252
Casimiro, I. 252
Charbonnier, M. 335
Citores, L. 310
Cocker, K.M. 318
Cohen, J.D. 1, 207
Coleman, J.R. 177
Cooke, T.J. 1
Craig, J. 86

Davies, N.W. 397
de Benito, F.M. 310
De Lorenzo, G. 429
De la Torre, C. 37
Derzaph, T.L.M. 360

Ebert, I. 506
Eckerskorn, C. 383
Emes, M.J. 100
Ernst, D. 169
Evans, D.E. 318

Fan, X. 444
Fellman, J.K. 444
Ferreras, J.M. 310
Flügge, U.-I. 366
Fornalé, S. 520
Fry, S.C. 78
Fujiwara, S. 269
Fulton, D.C. 78
Futsuhara, Y. 420

García-Maya, M.M. 93
Gayler, K.R. 480
Geshi, N. 295
Giersch, C. 16
Giménez-Abián, M.I. 37
Giménez-Martín, G. 37
Girbés, T. 310
Gläßgen, W.E 490
Gleitz, J. 490
Glund, K. 404
González de la Vara, L.E. 352
Gotschy, B. 201
Gradmann, D. 528
Grant, B.R. 480
Greilhuber, J. 506
Gries, G.E. 390
Grima-Pettenati, J. 437
Grimm, R. 383
Grimmer, C. 520
Grolig, F. 54

Hansen, J. 193, 201
Harrison E.P. 27
Häusler, R.E. 366
Hawkins, S. 437
Hayakawa, T. 288
Heide, L. 234
Heim, R. 193, 201
Hellmann, A. 220
Hepler, P.K. 450
Hernández-Sotomayor, S.M.T. 70
Hirata, A. 269
Hodson, M.J. 318
Hu, G. 324
Hu, Y. 212

Iglesias, R. 310
Ishida, H. 305
Ishiyama, K. 288

Jackson, D. 542
Jauh, G.Y. 450
Jebanathirajah, J.A. 177
Jiménez, P. 310
Jones, A.M. 207
Jones, C.G. 499
Juswono, U. 146

Kandzia, R. 383
Kawai, M. 277
Keizer, D.W. 480
Kilian, R. 260
Kirschbaum, M.U.F. 16
Kloepper, J.W. 153
Köck, M. 404
Knox, J.P. 252
Koch, W. 490
Komor, E. 520
Kuang, A. 183
Küppers, M. 16

Lacan, D. 377
Lange, B.M. 234
Lange, T. 409
Langenkämper, G. 242
Lauvergeat, V. 437
Lemaux, P.G. 542
Leprince, O. 109
Lindemann, P. 383
Lino, B. 352
Lloyd, J.C. 27
Lorbiecke, R. 140
Lord, E.M. 450
Lu, P. 345
Luckner, M. 383
Lüthen, H. 515
Lycett, G.W. 499
Lynnes, J.A. 360

MacKenzie-Hose, A.K. 397
Madlung, J. 490
Mae, T. 305
Makino, A. 305
Marque, C. 8
Marty, F. 335
Marty-Mazars, D. 335
Mattheis, J.P. 444
Méndez, E. 310
McMahon, M.B. 120
McPherson, M.J. 472
Merk, S. 44
Möhlmann, T. 226
Morita, E. 269
Murphy, D.J. 109
Musgrave, M.E. 183
Myton, K.E. 8

Navarrete, M.H. 37
Negrel, J. 8
Neuhaus, H.-E. 226
Newman, I. 146
Nishiguchi, M. 277
Noe, S. 16
Nozaki, H. 269

O'Neill, S.D. 345
Oecking, C. 127

Perata, P. 420
Peters, S. 64
Piotrowski, M. 127
Porat, R. 345
Pritchard, H.W. 109

Quick, W.P. 226

Raines, C.A. 27
Redgwell, R.J. 242
Ribnicky, D.M. 1, 207
Riederer, M. 44
Rijkenberg, F.H.J. 324
Rodríguez-Zapata, L.C. 70
Rose, A. 490
Ross, J.J. 397
Roy, S. 450
Ruffini-Castiglione, M. 506
Russell, S.D. 183

Salamini, F. 459
Salvi, G. 429
Sandermann, Jr., H. 169
Šamaj, J. 437
Samarajeewa, P.K. 277
Sanders, D. 528
Sato, N. 269
Sauter, M. 140
Schäfer, C. 193, 260
Schäffner, A.R. 131
Schlieben, N.H. 366
Schmidhalter, U. 212
Schmidt, W. 64
Schneider, H. 16
Schröder, R. 242
Schulz, B. 366
Schuster, B. 480
Scothern, G.P. 499
Seitz, H.U. 78, 490
Severin, K. 234
Shabala, S. 146
Shimizu, S. 305
Široký, J. 506
Smith, A.M. 86
Sonoike, K. 269
Stenzel, I. 404
Swain, S.M. 397

Tetlow, I.J. 100
Theierl, K. 404
Thom, E. 226
Thomas, D. 335
Tian, H.Q. 183
Tomlinson, K. 86
Tsuzuki, M. 269
Tucker, G.A. 499
Turano, F.J. 120
Tuzun, S. 153

Uchimiya, H. 277
Umemura, T. 420
Urwin, P.E. 472
Utrilla, L. 37

van Aelst, A.C. 109
Velasco, R. 459
Vogg, G. 193, 201
Vyskot, B. 506

Wagner, G.J. 390
Warneck, H.M. 78
Weger, H.G. 360
Wernicke, W. 220
Whittington, J. 146
Williams-Carrier, R. 542
Willingham N.M. 27

Yahiaoui, N. 8
Yamaguchi, J. 420
Yamaya, T. 288

Zaghi, D. 429
Zhang, S. 542
Zinser, C. 169

# Author index


Abe, T. 269
Allen, G.J. 528
Altamura, M.M. 429
Antognoni, F. 520
Argüeso, P. 310
Atkinson, H.J. 472
Atkinson, R.G. 242

Baccou, J.-C. 377
Bagni, N. 520
Baizabal-Aguirre, V.M. 352
Barker-Bridgers, M. 207
Barrero, R.A. 277
Barrieu, F. 335
Bartels, D. 459
Bassi, R. 260
Beerhues, L. 64
Bechthold, A. 234
Beck, E. 193, 201
Bellincampi, D. 429
Benhamou, N. 153
Blissett, K.J. 100
Blume, A. 44
Böttger, M. 515
Boudet, A. 437
Boudet, A.M. 8
Brandt, A. 295
Buck, K.W. 93
Büntemeyer, K. 515
Bůžek, J. 506

Caldwell, C.R. 120
Camara, B. 226
Cánovas, J.L. 37
Casero, P.J. 252
Casimiro, I. 252
Charbonnier, M. 335
Citores, L. 310
Cocker, K.M. 318
Cohen, J.D. 1, 207
Coleman, J.R. 177
Cooke, T.J. 1
Craig, J. 86

Davies, N.W. 397
de Benito, F.M. 310
De Lorenzo, G. 429
De la Torre, C. 37
Derzaph, T.L.M. 360

Ebert, I. 506
Eckerskorn, C. 383
Emes, M.J. 100
Ernst, D. 169
Evans, D.E. 318

Fan, X. 444
Fellman, J.K. 444
Ferreras, J.M. 310
Flügge, U.-I. 366
Fornalé, S. 520
Fry, S.C. 78
Fujiwara, S. 269
Fulton, D.C. 78
Futsuhara, Y. 420

García-Maya, M.M. 93
Gayler, K.R. 480
Geshi, N. 295
Giersch, C. 16
Giménez-Abián, M.I. 37
Giménez-Martín, G. 37
Girbés, T. 310
Gläßgen, W.E 490
Gleitz, J. 490
Glund, K. 404
González de la Vara, L.E. 352
Gotschy, B. 201
Gradmann, D. 528
Grant, B.R. 480
Greilhuber, J. 506
Gries, G.E. 390
Grima-Pettenati, J. 437
Grimm, R. 383
Grimmer, C. 520
Grolig, F. 54

Hansen, J. 193, 201
Harrison E.P. 27
Häusler, R.E. 366
Hawkins, S. 437
Hayakawa, T. 288
Heide, L. 234
Heim, R. 193, 201
Hellmann, A. 220
Hepler, P.K. 450
Hernández-Sotomayor, S.M.T. 70
Hirata, A. 269
Hodson, M.J. 318
Hu, G. 324
Hu, Y. 212

Iglesias, R. 310
Ishida, H. 305
Ishiyama, K. 288

Jackson, D. 542
Jauh, G.Y. 450
Jebanathirajah, J.A. 177
Jiménez, P. 310
Jones, A.M. 207
Jones, C.G. 499
Juswono, U. 146

Kandzia, R. 383
Kawai, M. 277
Keizer, D.W. 480
Kilian, R. 260
Kirschbaum, M.U.F. 16
Kloepper, J.W. 153
Köck, M. 404
Knox, J.P. 252
Koch, W. 490
Komor, E. 520
Kuang, A. 183
Küppers, M. 16

Lacan, D. 377
Lange, B.M. 234
Lange, T. 409
Langenkämper, G. 242
Lauvergeat, V. 437
Lemaux, P.G. 542
Leprince, O. 109
Lindemann, P. 383
Lino, B. 352
Lloyd, J.C. 27
Lorbiecke, R. 140
Lord, E.M. 450
Lu, P. 345
Luckner, M. 383
Lüthen, H. 515
Lycett, G.W. 499
Lynnes, J.A. 360

MacKenzie-Hose, A.K. 397
Madlung, J. 490
Mae, T. 305
Makino, A. 305
Marque, C. 8
Marty, F. 335
Marty-Mazars, D. 335
Mattheis, J.P. 444
Méndez, E. 310
McMahon, M.B. 120
McPherson, M.J. 472
Merk, S. 44
Möhlmann, T. 226
Morita, E. 269
Murphy, D.J. 109
Musgrave, M.E. 183
Myton, K.E. 8

Navarrete, M.H. 37
Negrel, J. 8
Neuhaus, H.-E. 226
Newman, I. 146
Nishiguchi, M. 277
Noe, S. 16
Nozaki, H. 269

O'Neill, S.D. 345
Oecking, C. 127

Perata, P. 420
Peters, S. 64
Piotrowski, M. 127
Porat, R. 345
Pritchard, H.W. 109

Quick, W.P. 226

Raines, C.A. 27
Redgwell, R.J. 242
Ribnicky, D.M. 1, 207
Riederer, M. 44
Rijkenberg, F.H.J. 324
Rodríguez-Zapata, L.C. 70
Rose, A. 490
Ross, J.J. 397
Roy, S. 450
Ruffini-Castiglione, M. 506
Russell, S.D. 183

Salamini, F. 459
Salvi, G. 429
Sandermann, Jr., H. 169
Šamaj, J. 437
Samarajeewa, P.K. 277
Sanders, D. 528
Sato, N. 269
Sauter, M. 140
Schäfer, C. 193, 260
Schäffner, A.R. 131
Schlieben, N.H. 366
Schmidhalter, U. 212
Schmidt, W. 64
Schneider, H. 16
Schröder, R. 242
Schulz, B. 366
Schuster, B. 480
Scothern, G.P. 499
Seitz, H.U. 78, 490
Severin, K. 234
Shabala, S. 146
Shimizu, S. 305
Široký, J. 506
Smith, A.M. 86
Sonoike, K. 269
Stenzel, I. 404
Swain, S.M. 397

Tetlow, I.J. 100
Theierl, K. 404
Thom, E. 226
Thomas, D. 335
Tian, H.Q. 183
Tomlinson, K. 86
Tsuzuki, M. 269
Tucker, G.A. 499
Turano, F.J. 120
Tuzun, S. 153

Uchimiya, H. 277
Umemura, T. 420
Urwin, P.E. 472
Utrilla, L. 37

van Aelst, A.C. 109
Velasco, R. 459
Vogg, G. 193, 201
Vyskot, B. 506

Wagner, G.J. 390
Warneck, H.M. 78
Weger, H.G. 360
Wernicke, W. 220
Whittington, J. 146
Williams-Carrier, R. 542
Willingham N.M. 27

Yahiaoui, N. 8
Yamaguchi, J. 420
Yamaya, T. 288

Zaghi, D. 429
Zhang, S. 542
Zinser, C. 169

# Subject index


Abscisic acid 459
Acetylesterase 383
Acid-growth theory (roots) 515
Actin 37
*Actinidia* 242
Active oxygen 305
Active oxygen species 377
Aerenchyma 277
Alga (green) 269
*Alocasia* (photosynthesis) 16
Aluminium toxicity 318
*Allium* 37
α-Amylase 420
Amyloplast 100
Anther 183
Anthocyanin (acylated) 490
Antioxidant enzymes 377
Antisense DNA 27
Antisense repression 366
Antisense strategy 8
Aquaporin 131
Aquaporin (γ-TIP) 335
*Arabidopsis* 260, 472
*Arabidopsis* (auxin analysis) 1
*Arabidopsis* (cell cycle) 345
Arabinogalactan-protein 252, 450
Ascorbate peroxidase 120
Auxin 207, 515
Auxin analysis 1
*Avena* (auxin analysis) 1
*Avena* (root, tonoplast) 390

Benzophenone cyclization (2,3′ 4,6-tetrahydroxy-benzophenone) 64
*Beta* 352
*Brassica* 295, 335

Cadmium 390
Calcium 146, 183, 390
Calcium channel 528
Callose 153, 450
Calvin cycle 27, 177
*Capsicum* 226
*Catharanthus* (transformed) 70
Carbohydrate oxidation 100
Carbon assimilation 27
Carbonic anhydrase 177, 269
Cardenolide 383
Catabolite repression 420
cdc2 kinase 140
cDNA 120
Cell cycle 345
Cell death 277
Cell division cycle 140
Cell shaping 220
Cell wall 242, 252, 383
Cell wall assembly 450
Cell wall extensibility 515
Cell wall signalling 78
*Centaurium* (cell cultures) 64
Chitin 153
*Chlamydomonas* (Fe limitation) 360
Chlorophyll 193
Chlorophyll-binding protein 193
Chloroplast 226, 305
Chromoplast 226, 499
Cinnamyl aldehyde 8
Cinnamyl alcohol dehydrogenase 8, 169
Cinnamyl alcohol dehydrogenase 2 (immunogold localization) 437
$CO_2$-concentrating mechanism 269
Copy DNA (*ATskp1*) 345
*Craterostigma* 459
Cryptogein 480
Crystallinity (wax) 44
*Cucumis* (senescence) 377
Current-voltage relationships 528
Cuticular wax (Fourier transform infrared spectroscopy) 44
Cyclin 140
Cytochrome $P_{450}$ oxidase 64
Cytomechanics 54

*Daucus* (cell culture) 490
Desiccation sensitivity 109
Desiccation tolerance 459
Development 409
Differentiation 429
*Digitalis* 383
DNA methylation 506
DNA primase 93

Ebulin 310
Electron paramagnetic resonance 201
Elicitin 480
Elicitor (*Pythium*) 490
Elicitor 153
Embryo (pea) 86
Endosperm nucleus (pentaploid) 506
Endotransglycosylase 242
Endotransglycosylase action 78
Epidermis 207
Ethylene 444
Extensin 252

Facultative heterochromatin 506
Ferric chelate reductase 360
Ferricyanide reductase 360
Frost hardening 193, 201
Fruit 242
Fruit physiology 226
*Fusarium* wilt 153

*Gagea* 506
Galactose oxidase 472
Gene expression (CDC2Zm KN1) 542
Gene expression 169, 335, 459
Gene expression (heterologous, functional) 409
Gene silencing 499
Gibberellin 397, 409
β-1,3-Glucanase 324
Glucose translocator 366
β-Glucuronidase (histochemistry) 437
*Glycine* (ascorbate peroxidase) 120
Glycosyltransferase 490
Growth 140, 207, 409

$H^+$-ATPase 352
*Hedera* 44
Hexokinase 420
*Hordeum* 220
*Hordeum* (shoot meristem) 542
Hydrolase 242
Hydroxyaluminosilicate 318
Hydroxycinnamoyl-transferase 490
3-Hydroxy-3-methylglutaryl-coenzyme A reductase 234
*Hypericum* (cell cultures) 64

Imbibition 109
Immunocytochemistry 324
Indole-3-acetic acid 207
Iron limitation 360
Isoform (starch synthase) 86
Isoprenoid biosynthesis 234

Jasmonate 295
Jasmonic acid 444
*Juglans* 44

Kinetic model 528
Kinetochore protein (*SKP1*gene) 345

Lanatoside 15′-*O*-acetylesterase 383
Leaf (starch synthesis) 86
Leaf elongation 212
Leaf rust pathogen 324
Lectin 295, 310
Light activation (Rubisco) 16
Light regulation 234
Light stress 305
Lightfleck (carbon gain) 16
Lignification 437
Lignin 8
*Lilium* (pollen tube) 450
Lipid peroxidation 377
Lipoxygenase activity 377
*Lithospermum* 234
*Lycopersicon* 499
*Lycopersicon* (cell suspension culture) 404
*Lycopersicon* (fruit ripening) 444

Malate 318
Male sterility 183
*Malus* (fruit ripening) 444
*Marchantia* (liverwort) 260
Mass spectrometry 1
Membrane fluidity 201
Membrane fluxes 146
Meristem (cell division) 345
Meristematic cell 335
Metallothionein 472
Metallothionien-like protein (PsMTa) 472
Methyl jasmonate 444
Mevalonate pathway 234
Microtubule 54, 220
Microfilament 54
Mineral elements 212
Minor chlorophyll a/b-binding protein (CP24, CP26, CP29) 260
Mitotic spindle 37
Model (photosynthesis) 16
Monooxygenase 409
Multienzyme complex 177
Mutant (pea) 397
Myrosinase-binding protein 295

Nematode 472
Net deposition rate (minerals) 212
Nickel 390
*Nicotiana* 8, 127, 366, 429
*Nicotiana* (carbonic anhydrase) 177
*Nicotiana* (DNA primase) 93
*Nicotiana* (transgenic) 27
Nucleus (positioning) 54

Oil body 109
Oleosin 109
Oligoribonucleotide primers 93
Oligosaccharin 78
Organogenesis (in vitro) 542
*Oryza* 140, 277, 420
*Oryza* (fertility) 183
Oscillation ($H^+$ flux) 146
Oxidative phenol coupling (regioselective couplings) 64
2-Oxoglutarate dependent dioxygenase 409
Ozone 169

Pectic fragments 429
Pectin 450

Pericycle (wall thickening) 429
Pericycle 252
Phase behaviour (cuticular wax) 44
*Phalaenopsis* 345
Phenolic compounds 153
Phosphate starvation 404
Phosphorylation of proteins 352
Photoperiod 201
Photosynthesis 16, 193, 269
Photosynthetic induction 16
Photosystem II antenna organization 260
Phragmoplast 37
Phragmosome 54
Phylogeny 127
Protein body (immunocytochemistry) 295
Phytoene synthase 499
*Pinus* (frost hardening) 193
*Pinus* (ozone stress) 169
*Pisum* stem (cell expansion) 78
*Pisum* (mutants) 397
*Pisum* (starch synthesis) 86
Plant cuticle (transport properties) 44
*Phytophthora* 480
Plasma membrane 352
Plasma membrane intrinsic protein 131
Plasmodesma 277
Plastid envelope (transport processes) 226
Pod (gibberellin content) 397
Pollen 183
Pollen tube 450
*Populus* (transformed) 437
Polyamine 520
Polygalacturonase 499
Preprophase 37
Primary metabolism 226
Promoter analysis 459
14-3-3 protein 127
Protein body (immunocytochemistry) 295
Protein degradation 305
Protein kinase 352
Protein phosphorylation 70
Proteinase inhibitor 472
Proton 146
Protoplast 146, 480
Pyrenoid 269

*Raphanus* (elicitin) 480
Rate theory 528
Recalcitrant seed 109
Red light 207
Resistance 324
Resurrection plant 459
Rheology 515
Ribonuclease 404
Ribosome-inactivating protein 310
Ribulose-1,5-bisphosphate carboxylase/oxygenase 177, 269, 305
*Ricinus* 520
Ripening 242, 444
Ripening 444
rRNA n-glycosidase 310
Root 277
Root development 252
Root growth 515
Root length 318
Salt stress 212
*Sambucus* 310
Scots pine 201
Sedoheptulose-1,7-bisphosphate 27
Seed (gibberellin content) 397
Seed storage 109
Selectivity filter 528
Senescence 377
Sequestration (cytoplasmic Pi) 404
Shikonin 234
Shoot meristem 542
Sieve-tube sap 520
Signal transduction 70
Silicon 318
Soil salinity 212
Somatic embryogenesis 383
*Spirogyra* 54
Stable isotopes 1
Starch synthase (isoforms) 86
Starch mobilisation 366
Starch synthesis 100
Stilbene synthase 169
Stoma (development) 429
Submergence 140
Sugar sensing 420

Terpene cyclase 409
Thylakoid 201
Tonoplast 390
Tonoplast intrinsic protein 131, 335
Transgene architecture 499
Translation (inhibition) 310
Transgenic plant (tobacco) 27
Transgenic tobacco 8
Translocation 520
Transport (ion) 390
Transport 131
Triose phosphate/phosphate translocator 366
*Triticum* (Al toxicity) 318
*Triticum* (amyloplast) 100
*Triticum* (light stress) 305
*Triticum* (pathogen resistance) 324
*Triticum* (salt stress) 212
Tubulin 37
Tubulin (content, isotype) 220
Tyrosine kinase 70

Ultraviolet light 490
Ultraviolet-B irradiation 169

Vacuole 295
Vacuole (membrane) 335
Vascular tissue 252
*Vicia* (calcium channel) 528

Wall appositions 153
Water 131
Water loss 480
Xanthone synthase 64

Xylem (translocation) 78
Xylem sap 520
Xyloglucan oligosaccharide 78

*Zea* (ion fluxes) 146
*Zea* (mesocotyl) 207
*Zea* (shoot meristem) 542